INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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Generators for horizontal driver

1. Apart from small differences, these types of generators made in the V.I. Lenin Works in Pilsen are of conventional designs. All are separately excited generators. Excitation is limited to 500 volts.

2. With some few exceptions for special orders, the Lenin Works make what are called standard types: 5,000, 10,000, 20,000, 50,000 and 100,000 kilovolt-amperes. The generators made for thermal power stations are always bi-polar for 300 revolutions per minute.

3. The Lenin Works make mostly generators for a frequency of 50 cycles. The electromotive force at the terminals is usually 6 KV. All these generators are fitted with thermostats, which are in the stators and armature. When the heat reaches danger point, the thermostats open the relays.

4. In the period 1948-1949, six generators for 200,000 KVA were made for the USSR. High-pressure steam turbines were also made for these generators, each working at 120 atmospheric pressure. Each generator is driven by two steam turbines, over a shaft prolonged on both sides and ending in hard couplings. Thus the generators are placed between the turbines.

5. The above generators, which are still being made, were for an output of 60,000 volts @ 100 cycles.

6. Frequency changers are made for 10,000 KVA. These frequency changers differ from the generator in that the armature is 10 times larger in diameter and serves as primary winding. The stator, which is the secondary winding, has 20 times as great a number of poles. The armature is bi-polar for 50 cycles. The secondary winding takes 500 volts with a frequency of 1,000 cycles. The winding of the armature has a special fitting with a powerful bandage to counteract centrifugal stresses on the winding of the armature.

7. Electric engines of 500-600 KW form part of the frequency changers.

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Vertical drive generators.

8. This kind of generator is used exclusively for hydroelectric power stations, and in principle there is no difference between it and the generator for horizontal drive. Only the armature is mounted on pressure bearings for heavy weights, so-called "trapezoidal pressure bearings".

9. As opposed to the generators for horizontal drive, the exciters are mounted directly on the axle of the armature of the generator in a vertical position in the upper part of the generator.

10. Generators for hydroelectric power stations are 5,000 KVA, and are usually of the Hardy type, made with sliding couplings.

11. Latterly, the production capacity of generators for hydroelectric power stations has been three times that of thermal generators. About 70 percent of the total production is destined for the USSR.

12. These generators are made for 6-24 KV and all work with a frequency of 50 cycles. Most of the generators for the USSR were for 200,000 KVA. The stators consisted of three parts, to facilitate shipment. The row of coils had to be put in the slots of the stator after it had been assembled. Groups of fitters from the Lenin Works went to the Volga, Don, Dnieper, and Ural regions to assemble the generators.

13. Two months are required for the production of a generator in the Doudlevce Plant of the V.I. Lenin Works at Doudlevce, near Pilsen. No further data on the output are available.

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